

Ch 23 Roundworms and Echinoderms

KEY CONCEPT

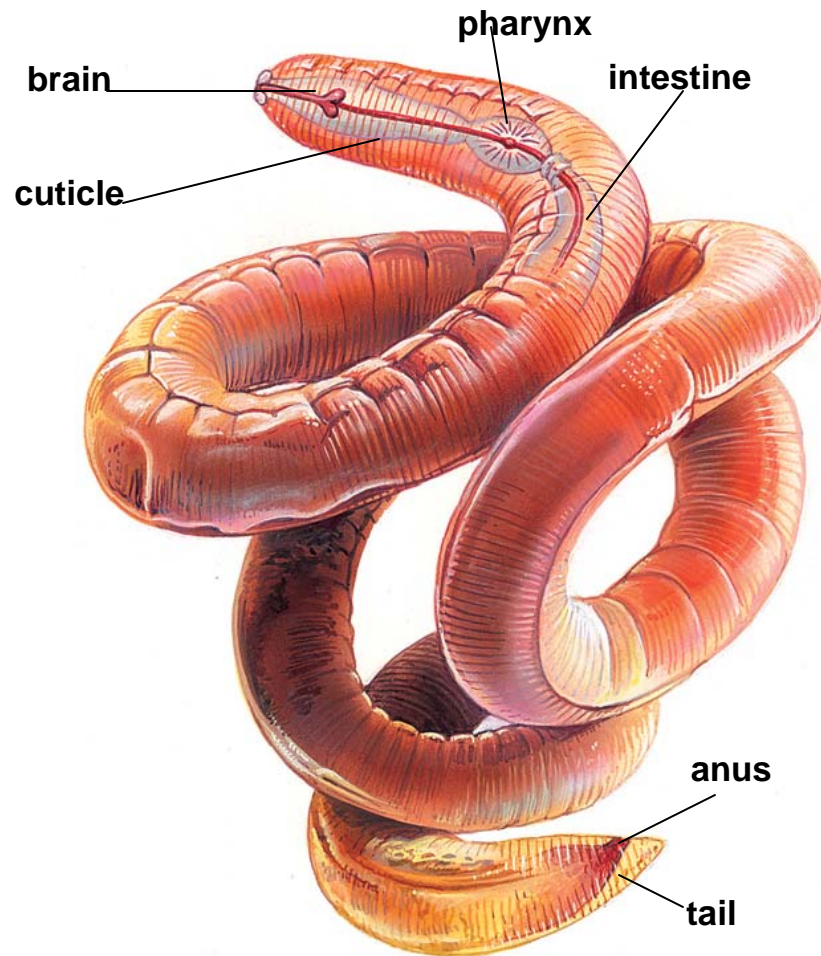
Roundworms have bilateral symmetry and shed their outer skeleton to grow.



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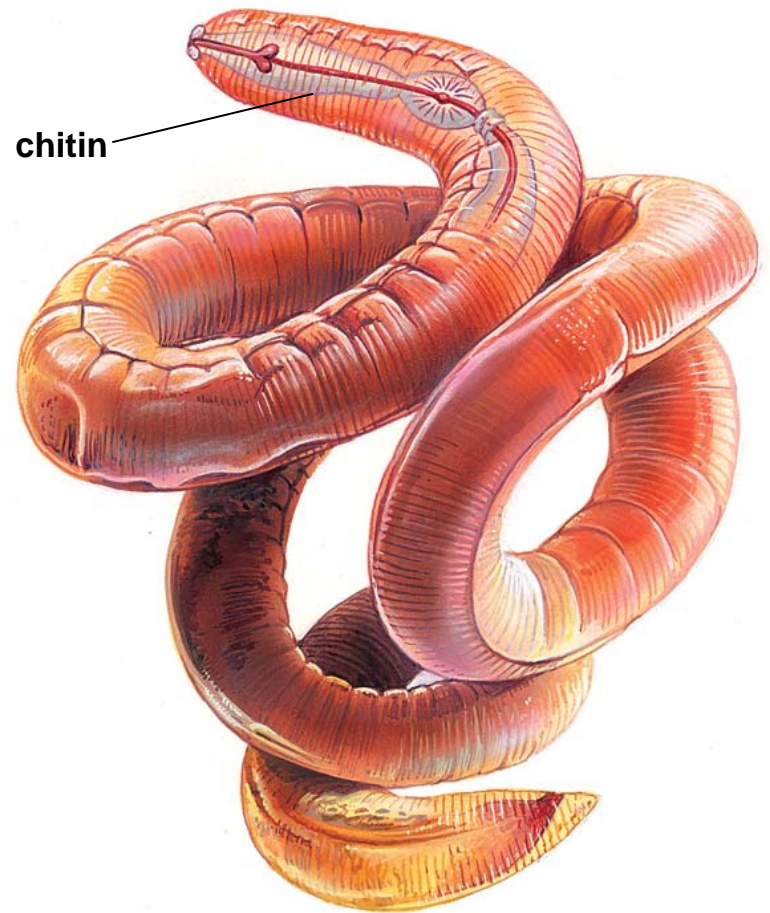
- ▶ Roundworms shed their stiff outer skeleton as they grow.

- Roundworms are protostomes with bilateral symmetry.



Ch 23 Roundworms and Echinoderms

- Roundworms have a tough outer skeleton called a cuticle.
 - made of chitin
 - must be shed to grow
- Roundworms have a pseudocoelom, not completely lined by muscle.
- Roundworms reproduce sexually.



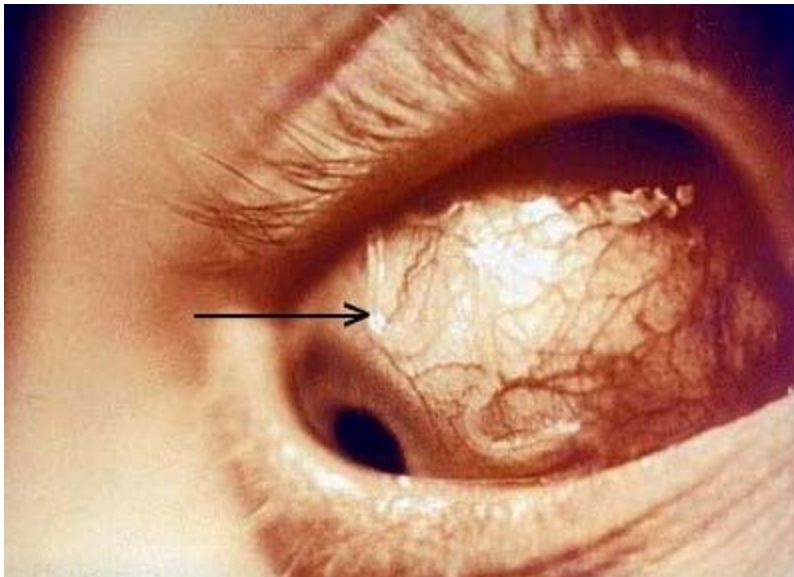
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▶ Many roundworms are parasites.

- Nearly every plant and animal species are parasitized by roundworms.
 - hookworms
 - pinworms
 - Guinea worms



Guinea worm



Loa loa



Pin worms

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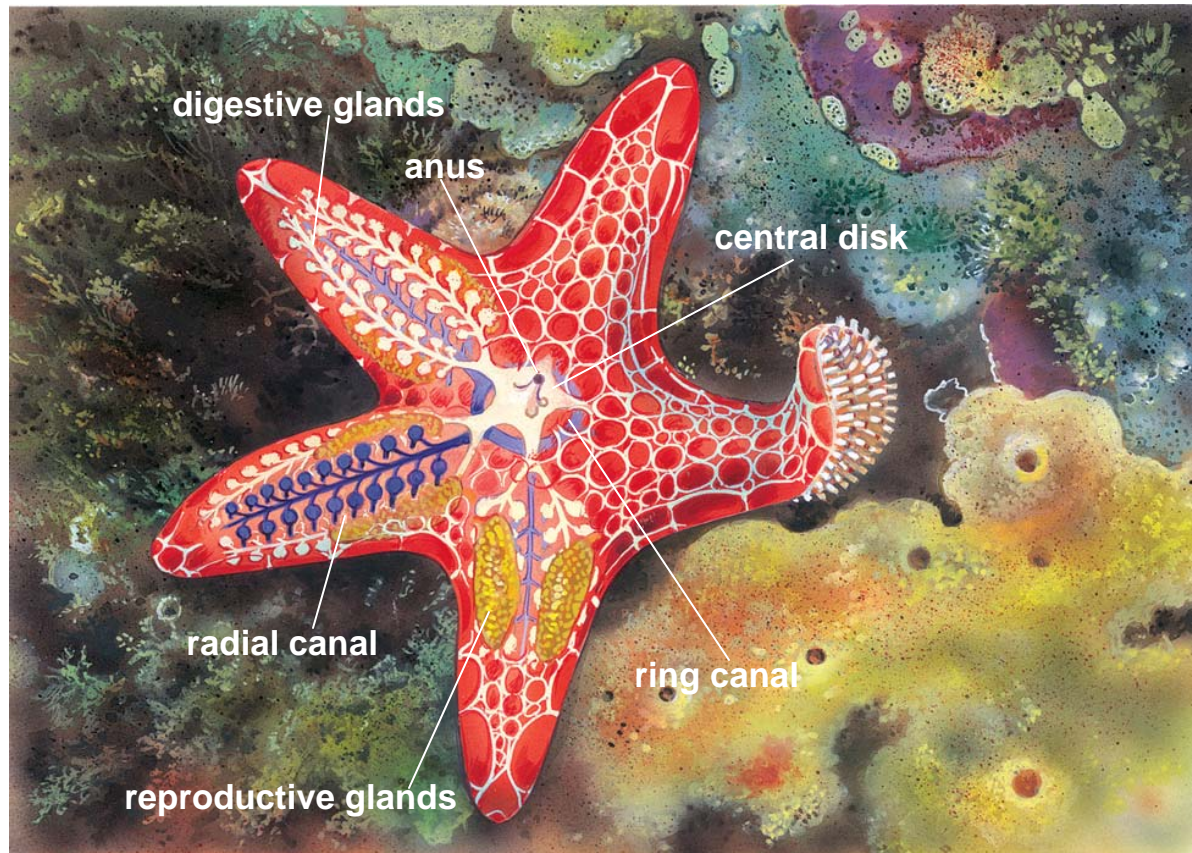
Echinoderms are on the same evolutionary branch as vertebrates.



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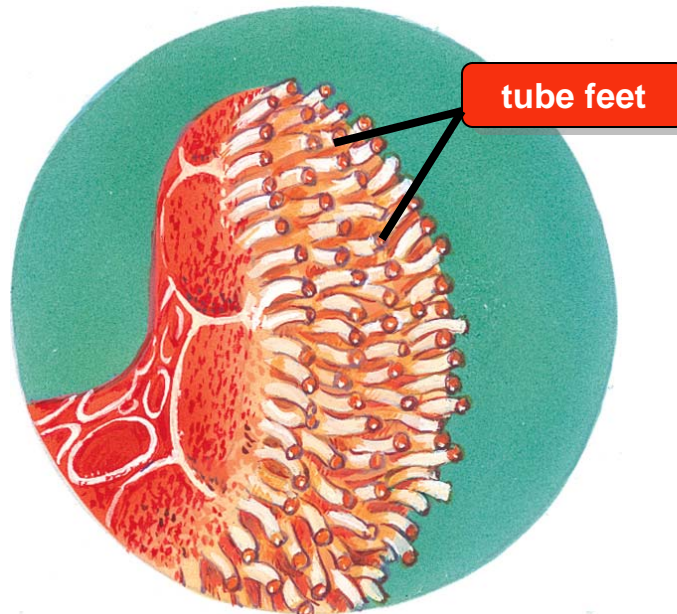
▶ Echinoderms have radial symmetry.

- Echinoderms have an internal skeleton made of interlocking ossicles.



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- Echinoderms have a water vascular system.
 - a series of water-filled ring canals around central disk
 - canals store water used for circulation and movement
 - changes in water pressure extend and retract tube feet



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- Echinoderms have a complete digestive system.
- Some echinoderms can regenerate limbs or other body parts.

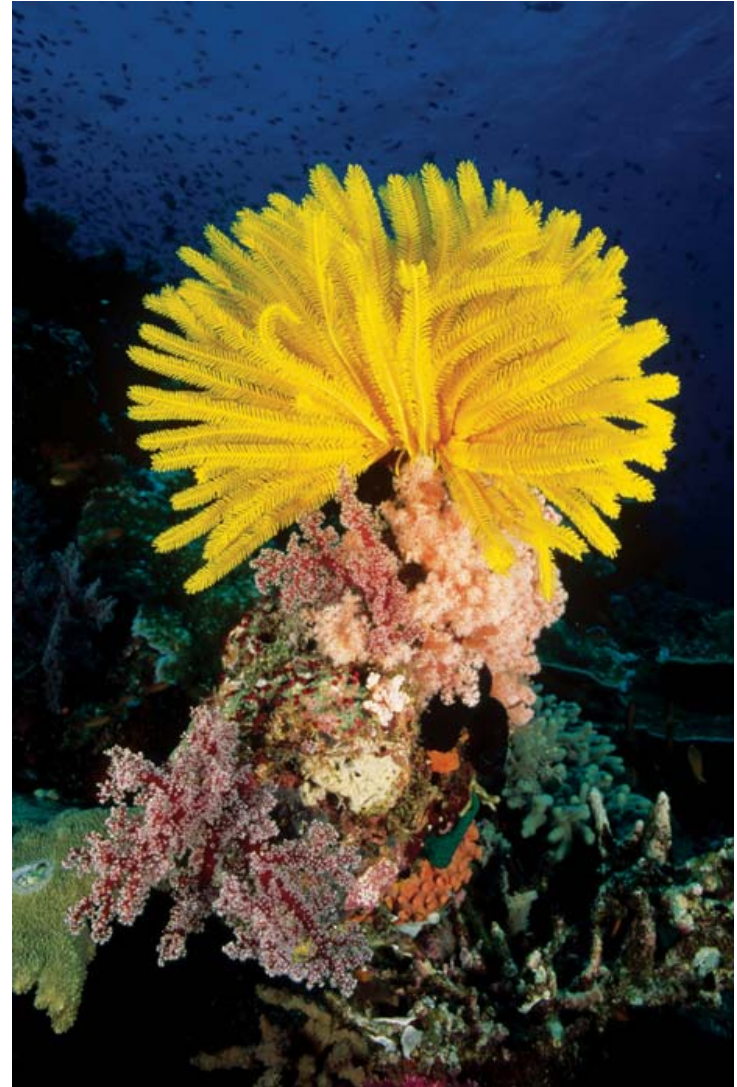


- Most echinoderms reproduce sexually.

Ch 23 Roundworms and Echinoderms

▶ There are five classes of Echinoderms.

- Feather stars and sea lilies are in the class **Crinoidea**.



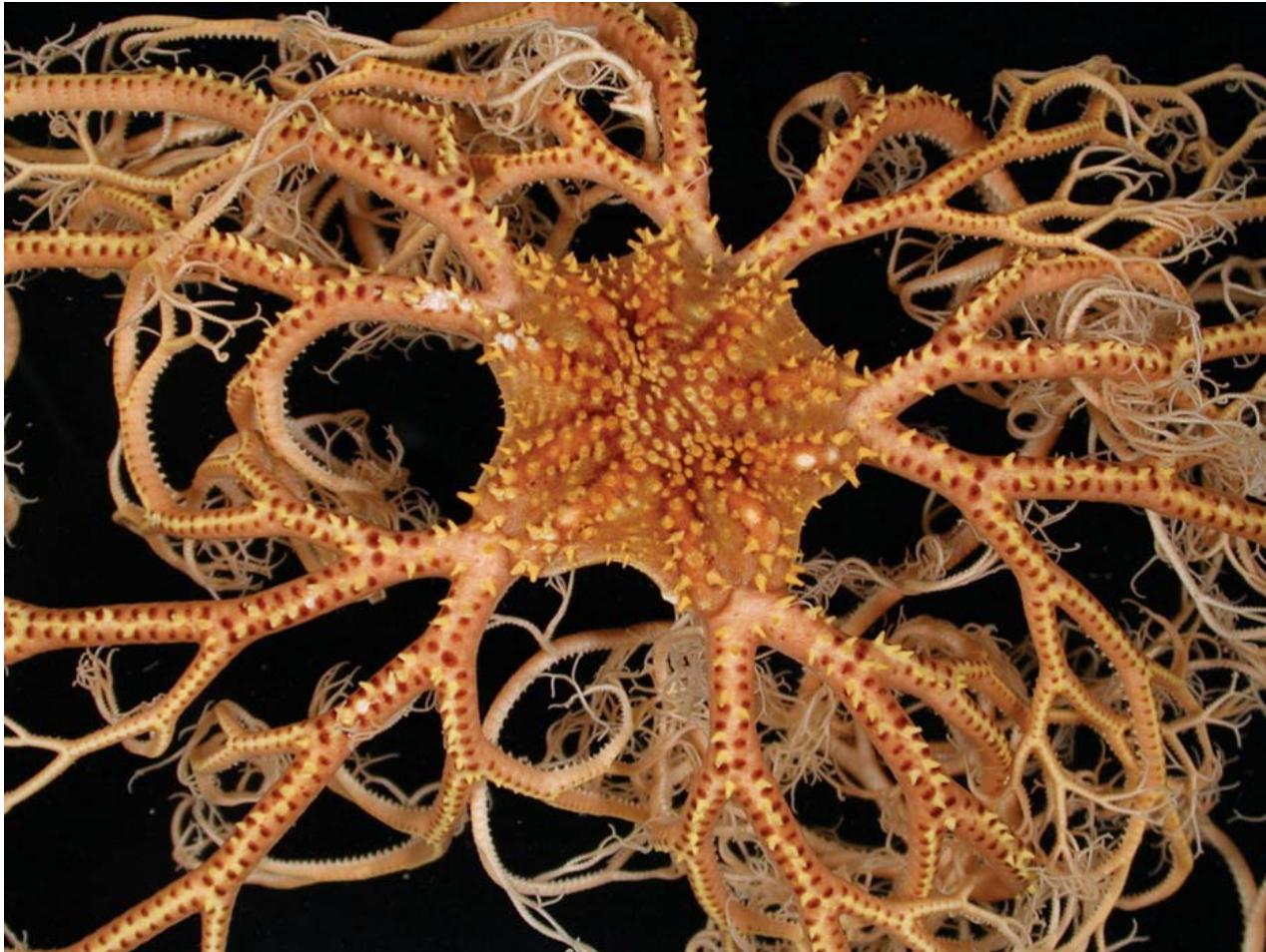
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- ▶ There are five classes of Echinoderms.
 - Sea stars are in the class **Asteroidea**.



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- ▶ There are five classes of Echinoderms.
 - Brittle stars and basket stars are in the class **Ophiuroidea**.



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▶ There are five classes of Echinoderms.

- Sea urchins, sea biscuits, and sand dollars are in the class **Echinoidea**.



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- ▶ There are five classes of Echinoderms.
 - Sea cucumbers are the only members of the class **Holothuroidea**.

